

REMARKS

Claims 1-10 are pending, with claims 1 and 6 being independent. By virtue of this amendment, claim 7 is amended.

Claim 7 is rejected under 35 USC section 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant believes that the above-referenced amendment to claim 7 addresses this rejection, and requests that the rejection be withdrawn.

Claims 1-10 are rejected under 35 USC section 103(a) as being unpatentable over *Conroy, et al.* (U.S. Patent 6,459,684, hereinafter “Conroy”) in view of *Schwartzman, et al.* (U.S. Patent 6,888,883, hereinafter “Schwartzman”).

In response, Applicant respectfully submits that the above rejection fails to establish a prima facie case of obviousness, and should therefore be withdrawn. For example, the rejection does not provide a proper motivation to modify Conroy in view of Schwartzman in the manner described, in order to obtain the subject matter of at least independent claims 1 and 6.

For example, claim 1 recites:

A method of noise reduction for a transceiver transmitting frames over a transmission medium in a frame-based communications network comprising:

providing a transceiver transmit path and a transceiver receive path;

locating a blocking switch in the transceiver transmit path, the blocking switch allowing transmit signal propagation when enabled, while preventing both transmit signal propagation and circuit device noise coupling from the transceiver transmit path to the transceiver receive path when the blocking switch is disabled; and

disabling the blocking switch when the transceiver transmit path is not transmitting frames over the frame-based communications network.

In rejecting claim 1, the Office Action admits that Conroy does not disclose “the claimed noise reduction, locating a blocking switch in transmit path, the blocking switch allowing transmit signal propagation when enabled (and) preventing both transmit signal propagation and circuit device noise coupling from transceiver transmit path to transceiver receive path when blocking switch is disabled” (Office Action, page 4).

Instead, the Office Action looks to Schwartzman for these claim elements, stating that Schwartzman discloses, “a device to reduce noise leakage from cable modem when cable modem is not actively transmitting,” and points to switch element 416 as providing teaching of the claimed blocking switch. The Office Action goes on to state that it would have been obvious to modify Conroy with the switching component (416) of Schwartzman “... to reduce or eliminate noise leakage on an upstream channel to increase quality of upstream data transmission” (Office Action, pages 4-5)

In response, Applicant submits that Schwartzman is directed to techniques for dealing with “transient noise leakage from a cable modem,” such as from an upstream transmitter 206 of the cable modem (see, e.g., column 4, lines 37-51). Schwartzman discloses that such leakage is problematic because, “a significant noise problem occurs when many modems in a service area having hundreds of cable modems... have leakage (since) leakage from the modems accumulates at the head end and raises the noise floor of the upstream spectrum.” Schwartzman also notes, however, that “power leakage from one or two cable modems is not noticeable.” (see column 5, lines 14-25, and FIG. 3).

Conroy, on the other hand, discloses a technique (see, e.g., FIG. 6A of Conroy) for providing echo cancellation, which is a technique for improving a quality of a receive signal, not a transmit signal. Specifically, Conroy discloses the benefit of (with emphasis added) “cancel(ing) leakage of the upstream transmission signal into the downstream receive signal path, and does not disclose or properly suggest the recited motivation of “reduce(ing) or eliminate(ing) noise leakage on an upstream channel to increase quality of upstream data transmission.” Accordingly, Conroy does not recognize the need “to reduce or eliminate noise leakage on an upstream channel to increase quality of upstream data transmission,” as recited in the Office Action.

Moreover, Conroy certainly does not recognize the need or motivation of Schwartzman of reducing a cumulative effect of “hundreds of cable modems,” since Conroy is not directed to the field of cable modems, nor does Conroy discuss such cumulative effects in the context of the therein-discussed remote terminals 162. Further, to the extent that the teachings related to the cable modems of Schwartzman are related at all to the remote terminals 162 of Conroy, Schwartzman teaches away from the proposed combination by stating that “power leakage from

one or two” modems (or, *arguendo*, remote terminals 162) is “not noticeable” and therefore would not justify the added expense or difficulty of adding the switch 416 to (e.g., the system of FIG. 6A of) Conroy. Thus, it is only in the context of a cumulative effect of power leakage in upstream transmissions that Schwartzman suggests the need for the switch 416 to reduce such leakage, while Conroy, far from recognizing the stated need of Schwartzman, does not recognize any need “... to reduce or eliminate noise leakage on an upstream channel to increase quality of upstream data transmission.”

Further, Applicant submits that there is no reasonable expectation of success for the proposed combination. For example, Conroy discloses, e.g., in the system of FIG. 6A, a scheme for providing time-division multiplexing in conjunction with the transmitter 612 in order to use the same DAC 601 to provide both the transmit signal and the echo cancellation signal (by way of the echo canceler 614) (see, e.g., column 8, line 15 to column 9, line 7). Meanwhile, Schwartzman discloses that a transmitter 406 sends a data signal via control line 412 to switch component(s) 410/416. (see, e.g., column 8, lines 54-65). Thus, there is no indication or teaching that would provide a reasonable expectation that the transmitter 612 of Conroy would have been modifiable to include/operate a switch similar to the switch 416 of Schwartzman, without disrupting the operation of the time-division multiplexed scheme of Conroy.

Based on the above, Applicant respectfully submits that the proposed combination is improper, and requests that the rejections based thereon be withdrawn. Accordingly, claim 1 is believed to be allowable for at least the above reasons, so that dependent claims 2-5 are believed to be allowable for at least the same reasons. Independent claim 6, which is subject to the same rejection, is thus believed to be allowable for the same or similar reasons, so that dependent claims 7-10 are believed to be allowable for at least the same reasons.

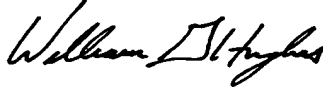
Accordingly, Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (703-286-5735) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 50-3521.

Respectfully submitted,

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By 
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